

## Annexure – I

[Must be submitted with offer]

(Indent Computer No.- 9224)  
(Specification and compliance sheet)

**Note:** Mention “Yes” or “No” in respective column.

**a) Item No.-1 : 3-1/2 Digit, 6000 Counts, True RMS Digital Multimeter**

To mention here the offered Make: \_\_\_\_\_ and Model No.: \_\_\_\_\_

Sr. No.	Parameter	Specifications	Compliance by the bidder (Yes/No)
1)	Digital Display :	3-1/2 digit (updates 4 times/sec.), 6000 counts, Analog bar graph with backlight.	
2)	DC Voltage :	Range: 0.1mV to 1000V , Accuracy : $\pm(0.09\% + 2)$ , Resolution : 0.1mV	
3)	AC Voltage :	Range : 0.1mV to 1000V, Accuracy: $\pm(1.0\% + 3)$ , Resolution 0.1mV(true RMS)	
4)	Continuity :	Beeper guaranteed on < 25 $\Omega$ , detects opens or shorts of 250 $\mu$ sec. or longer	
5)	DC Current :	Range: Max. 10A (20A over-range for 30 seconds), Accuracy: $\pm(1.0\% + 3)$ ; Resolution 0.01 A	
6)	AC Current :	Range: Max. 10 A (20 A over-range for 30 sec.), Accuracy: $\pm(1.5\% + 3)$ , Resolution 0.01 A	
7)	Resistance :	Range: Max. 50M $\Omega$ Accuracy: $\pm(0.9\% + 1)$ , Resolution 0.1 $\Omega$	
8)	Capacitance :	Range: Max. 10,000 $\mu$ F, Accuracy: $\pm(1.2\% + 2)$ , Resolution 1nF	
9)	Frequency :	Range: Max. 100 kHz, Accuracy: $\pm(0.1\% + 1)$ , Resolution 0.01 Hz	
10)	Temperature :	Range: - 40°C / 400°C, Accuracy: $\pm(1.0\% + 10)$ , Resolution 0.1°C	
11)	Environmental Specifications :	a) Operating temperature up to +50°C.	
		b) Storage temperature up to +60°C.	
		c) Humidity (without condensation) up to 70% (35°C – 50°C).	
12)	Safety Specifications :	a) Overvoltage category: EN 61010–1 to 1000V CAT III, EN 61010–1 to 600 V CAT IV.	
		b) Agency approvals: UL, CSA, TÜV.	

13)	Warranty :	Limited lifetime warranty.	
14)	Battery type :	9V alkaline battery.	
15)	Battery life :	Alkaline ~200 hours typical, without backlight.	
16)	Other features :	a) Manual and automatic ranging.	
		b) Display Hold and Auto Hold.	
		c) Diode measurements.	
		d) Min-max-average recording.	
		e) Closed case calibration through front panel.	
		f) Ergonomic case with integrated protective holster.	
		g) Built-in probe holders for probe storage and for convenience when making measurements.	
		h) Size –HxWxD (approximate) : 190 mm x 85 mm x 45 mm.	
		i) Weight: 450 gm or less.	
17)	Included accessories :	a) Temperature Probe.	
		b) 9 V battery.	
		c) Test leads.	
		d) User's manual.	
18)	Note :	a) Valid authorization certificate required from OEM, without which offer will not be considered.	
		b) Calibration Test certificate to be provided along with the instrument.	
		c) Training/Demo of equipment required at site after delivery.	

**b) Specification of Item No.-2 : 4-1/2 Digit, 50,000 Counts Digital Multimeter**

To mention here the offered Make: \_\_\_\_\_ and Model No.: \_\_\_\_\_

Sr. No.	Parameter	Specifications	Compliance by the bidder (Yes/No)
1)	Digital Display :	Large 50,000 count, ¼ inch VGA display with white backlight. Multiple sets of measurement information can simultaneously be displayed at the same time.	
2)	DC Voltage :	Range: 50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0V Accuracy: 0.025 % , Resolution: 0.001mV, 0.01mV, 0.0001V, 0.001V, 0.01V, 0.1V	
3)	AC Voltage :	Range: 50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0V Accuracy: 0.4 % (true-rms) , Resolution: 0.001mV, 0.01mV, 0.0001V, 0.001V, 0.01V, 0.1V	
4)	Continuity :	Beeper guaranteed on < 25 Ω, detects opens or shorts of 250 μ sec. or longer.	
5)	DC Current :	Range: 500.00 μA, 5000.0 μA, 50.00 mA, 400.00 mA, 5A, 10A Accuracy: 0.15 % , Resolution: 0.01 μA, 0.1 μA, 0.001 mA, 0.01 mA, 0.0001A, 0.001A	
6)	AC Current :	Range : 5.0000 A, 10.000 A Accuracy: 0.7 % (true-rms), Resolution: 0.01 μA, 0.1 μA, 0.001 mA, 0.01 mA, 0.0001A, 0.001A	
7)	Resistance :	Range: 500.00 Ω, 5.0000 kΩ, 50.000 kΩ, 500.00 kΩ, 5.0000 MΩ, 30.00 MΩ, 50.00 MΩ, 500.00 MΩ Accuracy : 0.05%, Resolution: 0.01 Ω, 0.0001 kΩ, 0.001 kΩ, 0.01 kΩ, 0.0001 MΩ, 0.001 MΩ, 0.01 MΩ, 0.1 MΩ	
8)	Capacitance :	Range: 1.000 nF, 10.00 nF, 100.00 nF, 1.000 μF, 10.00 μF, 100.0 μF, 1000 μF, 10.00 mF, 100.00 mF Accuracy : 1.0%, Resolution : 0.001 nF, 0.01 nF, 0.1 nF, 0.001 μF, 0.01 μF, 0.1 μF, 1 μF, 0.01 mF, 0.1 mF	
9)	Frequency :	Range: 99.999 Hz, 999.99 Hz, 9.9999 kHz, 99.999 kHz, 999.99 kHz Accuracy: 0.005%, Resolution: 0.001 Hz, 0.01 Hz, 0.0001 kHz, 0.001 kHz, 0.01 kHz	

10)	Temperature (excluding probe) :	Range: -200.0 °C to 1350.0 °C Accuracy : 1.0% , Resolution: 0.1 °C		
11)	True-rms AC bandwidth :	100 kHz		
12)	Conductance :	50.00 nS		
13)	Peak :	250 µS		
14)	Duty Cycle :	0.01 % to 99.99 %, Resolution : 0.01 %		
15)	Pulse Width :	0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms Resolution : 0.0001 ms, 0.001 ms, 0.01 ms, 0.1 ms		
16)	Logging Memory :	Up to 10,000 readings		
17)	Environmental Specifications :	a)	Operating temperature up to +55°C	
		b)	Storage temperature up to +60°C	
		c)	Humidity (without condensation) up to 70% (35°C – 50°C)	
18)	Safety Specifications :	a)	Overvoltage category: EN 61010–1 to 1000V, CAT III, EN 61010–1 to 600 V CAT IV.	
		b)	Agency approvals: UL, CSA, TÜV.	
19)	Warranty :	Limited lifetime warranty		
20)	Battery type :	6 AA alkaline batteries, NEDA 15A IEC LR6		
21)	Battery life :	100 hours minimum, 200 hours in logging mode		
22)	Other features :	a)	Should have zoomed on trend unprecedented ability to view analyze Trend Capture data; see detail at X5 magnification.	
		b)	Simplified record screen when setting up recording.	
		c)	Logging function with expanded memory for unattended monitoring of signals over time. Using on-board trend capture can graphically review logged readings without needing a PC. Store up to 15,000 recorded events.	
		d)	Logging function with trend Capture for documenting the performance of designs, processes or systems, or unattended monitoring while work on other projects. Plots measurements as a single line to help detect signal anomalies over time. Using on-board trend capture, graphically view logged readings	

			without a PC.	
		e)	Log multiple sessions or log data continuously for over 200 hours.	
		f)	On board screens for measurement functions.	
		g)	Real Time Clock - for automatic time stamping of saved readings.	
		h)	Min/Max/Average with Time Stamp to record signal fluctuations.	
		i)	Soft keys, scroll buttons and easy navigation control access to secondary functions.	
		j)	True-rms ac voltage and current for accurate measurements on complex signals or non-linear loads.	
		k)	Relative mode to remove test lead resistance from low ohms or capacitance measurements.	
		l)	Peak capture to record transients as fast as 250 $\mu$ s.	
		m)	Included premium test leads and alligator clips.	
		n)	Elapse time clock.	
		o)	Time of day clock.	
		p)	Min-Max-Avg.	
		q)	Hold feature.	
		r)	Isolated Optical Interface.	
		s)	Auto/Touch Hold feature.	
		t)	Reading memory feature.	
		u)	Log to PC.	
		v)	Interval/Event Logging feature.	
		w)	Electromagnetic Compatibility :EMC EN6 1326-1	
		x)	Vibration: Random vibration per MIL-PRF-28800 f Class-2.	
		y)	Shock: 1 meter drop per IEC/EN 61010-1 2nd edition.	
		z)	Size (HxWxL) approximate : 22.2 cm x 10.2cm x 6 cm (8.75 in x 4.03 in x2.38 in)	
		aa)	Weight: 880 g or less.	

23)	Included accessories :	a)	User's manual..	
		b)	6 AA Batteries.	
		c)	Silicone Test Leads.	
		d)	Probe Holder	
		e)	Two Alligator Clips	
24)	Note :	a)	Valid authorization certificate required from OEM, without which offer will not be considered.	
		b)	Calibration Test certificate to be provided along with the instrument.	
		c)	Training/Demo of equipment required at site after delivery.	